

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 17, 2019

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** B. Caleca and P. Fox, Hanford Resident Inspectors  
**SUBJECT:** Hanford Activity Report for the Week Ending May 17, 2019

**Building 324:** Pilot hole drilling resumed with no detectable spread of material outside of the drill rig after addition of new dust-suppression and confinement controls (see 4/26/2019 report).

**Plutonium Finishing Plant (PFP):** A posting violation at a Container Transfer Area (CTA) resulted in multiple workers entering a Contamination Area (CA)/Airborne Radioactivity Area (ARA) without proper personal protective equipment (PPE). CTAs are used to stage roll-on/roll off cans. When shipping cans to ERDF, a CTA is posted as a Radiological Buffer Area (RBA)/Radioactive Material Area (RMA), but are up-posted to a CA/ARA when workers take empty cans for loadout or stage loaded cans prior to release. Under current practice, there is no distinct signage when approaching a CTA from the PFP CA/ARA while it is a RBA/RMA. Instead, CA/ARA signs facing into the CTA when the area is down-posted are marked as “staged for future use” on the opposite side where demolition workers approach from. Management addressed recent concerns about not posting RMA/RBA signs by establishing a practice of removing or dropping the rope boundary between the CTA and the demolition CA/ARA when the area is up-posted. However, this practice was not formalized in the work instruction. This week, a new field work supervisor (FWS) was responsible for CTAs and did not instruct personnel to up-post the CTA or remove the boundary after staging empty ERDF cans. A worker assigned to the demolition zone was sent to collect empty cans for demolition loadout. When the worker encountered the rope barrier without an RBA/RMA sign, they dropped the barrier to allow trucks to take cans into the demolition area, but did not inform radiological control personnel, the Demolition FWS, or the CTA FWS. For the next day demolition workers incorrectly assumed this CTA had been up-posted to a CA/ARA and continued loadout activities. The day after, based on the actual posting, individuals wearing PPE for a RBA/RMA entered the CTA to perform work. The FWS responsible for the CTAs observed that the posting was inconsistent with ongoing work activities, stopped work, and requested support to clear the individuals without proper PPE. Surveys of these individuals did not detect any contamination. Based on the results of a critique, management intends to better communicate the status of radiological postings and is adding RMA/RBA signs to all sides of CTAs. However, they have not yet taken action to formalize the procedure for posting of CTAs in the work instructions.

**Tank Side Cesium Removal (TSCR):** The TSCR project is reviewing the atmospheric dispersion parameter used for their consequence calculations. They currently use the standard value from DOE Standard 1189-2008, *Integration of Safety into the Design Process*, to calculate consequences for collocated workers. DOE reviewers noted that the value assumes the presence of a large structure at the release point and that the use of the value may not be conservative because TSCR does not have a large structure. They are also adopting a specific administrative control for spray leak mitigation that will result in a lower safety classification of TSCR hose-in-hose transfer lines, pipes, and connectors in waste systems as compared to existing tank farm systems. Lastly, based on the use of a revised seismic hazard, they determined that the expended resin canister restraints and storage pad base no longer need to be safety-significant.